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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**Docket Number (Optional)  
04-850

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Application Number  
10/511,502Filed  
April 4, 2005on February 14, 2008Signature /A. Blair Hughes/First Named Inventor  
Andrew Robert HarveyTyped or printed  
name A. Blair HughesArt Unit  
2877Examiner  
Abdullahi Nur

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor./A. Blair Hughes/

Signature

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)A. Blair Hughes

Typed or printed name

☒ attorney or agent of record.Registration number 32,901312-913-2123

Telephone number

☐ attorney or agent acting under 37 CFR 1.34.February 14, 2008

Date

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.☐ \*Total of \_\_\_\_\_ forms are submitted.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
(Case No. 04-850)

In the Application of:	)	
	)	
Andrew Robert Harvey	)	Examiner: Abdullahi Nur
	)	
Serial No. 10/511,502	)	
	)	Group Art Unit: 2877
Filed: April 4, 2005	)	
	)	
Title: Imaging Spectrometer	)	Conf. No. 4201

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW REMARKS**

Pre-appeal brief review is requested for the above application. This paper sets forth Applicant's concise statement of clear errors in the Examiner's final rejection.

**I. BACKGROUND**

The examiner finally rejected claims 1-4 and 12-20 for being anticipated by Hopkins (USP 5,982,497). The examiner also finally rejected claims 5-11 for being obvious over Hopkins in view of Greivenkamp (USP 4,575,193).

This application includes independent claims 1 and 20. Claims 1 and 20 are directed to the same subject matter except claim 20 uses means plus function terminology to recite certain claim features. Claims 1 and 20 are reproduced below.

1. An imaging spectrometer comprising;  
an imager for dividing a received image into two or more spatially separated spectral images, and  
detector apparatus for detecting each spectral image,  
wherein the imager comprises at least one polarising beam splitter.
20. An imaging spectrometer comprising;  
imaging means for dividing a received image into two or more spatially separated

spectral images, and  
means for detecting each spectral image,  
characterised in that the imaging means comprises at least one polarising beam splitter.

## **II. TRAVERSE OF THE ANTICIPATION REJECTION**

Claims 1-4 and 12-20 stand finally rejected for anticipation by Hopkins. The examiner's anticipation rejection cannot be sustained because: (1) the anticipation rejection is legally and technically flawed; and (2) Hopkins does not disclose every feature of the claimed invention.

### **A. The Examiner's Anticipation Rejection Is Legally And Technically Flawed**

#### **1. The anticipation rejection is legally flawed**

In order for a reference to anticipate, the reference must show the same invention in as complete a detail as claimed. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Moreover, the elements must be arranged in the reference as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Hopkins does not anticipate claims 1-4 and 12-20 because the reference does not disclose the claimed elements arranged as claimed. Instead, the examiner draws elements from disparate embodiments in Hopkins to form the claimed invention. For example, the examiner relies upon the "Brief Introduction to the Invention" section of Hopkins for disclosing "two or more spectrally separated images". (Col. 2, lines 49-53). The examiner finds the "detector apparatus 36" in the Hopkins Figure 1 embodiment. (Col 5, line 34). Finally, the examiner alleges (wrongly so) that the Hopkins Figure 4 embodiment has or can have a polarising beam-splitter. (Col. 7, lines 44-54).

Finding all elements of a claimed invention in a single reference is not enough to sustain an anticipation rejection. The elements must also be arranged in the reference as they are claimed. In other words, anticipation requires identity - the identical invention must be shown in as complete a detail as set forth a patent claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d at 1236, 9 USPQ2d at 1920; *Glaverbel S.A. v. Northlake Mkt'g & Supply, Inc.*, 45 F.3d 1550, USPQ2d 1496 (Fed. Cir. 1995). As shown above, the examiner has cobbled together different elements of different Hopkins embodiments to allegedly form the claimed invention. The examiner's rejection is legally flawed because Hopkins must identically disclose the claimed invention and it does not. Therefore, claims 1-4 and 12-20 are novel and patentable.

## **2. The anticipation rejection is technically flawed**

The anticipation rejection is technically flawed to the extent the examiner is taking the position that a filter in one of the Hopkins embodiments can be replaced with a polariser on the basis of the disclosure at col. 4, lines 14-19 of Hopkins. At first glance, this appears to be the basis of an obviousness rejection and not a rejection based upon anticipation. Regardless, the examiner's position is technically flawed because even if the filters are replaced with the polariser as the examiner suggests, then an apparatus different from the claimed apparatus results.

For example if the spectral filters 30 in the Hopkins Figure 1 and Figure 3 embodiments are replaced with polarisers, then one might argue that beamsplitter 26 plus the polarisers amount to a "polarising beam-splitter". The technical problem with this position is that the resulting device is not a spectrometer because there is nothing in the apparatus to resolve different wavelengths. Two images with exactly the same spectral content would be produced at the detector(s) 36. So whilst there the combination could result in a structure that could be called a "polarising beam-splitter", the resulting device would not be a spectrometer.

A similar un-claimed apparatus results after modifying the Figure 9 embodiment. If filters 30 are replaced with polarisers, the beam-splitter 26, 28 plus the polariser could be called a "polarising beam splitter" as the components split and then polarise input light. However, the function of resolving different wavelengths is lost. Again the resulting apparatus forms two images having the same spectral content. The resulting apparatus would be an imager, and not an imaging spectrometer.

Finally, if the interference filters of the embodiments of Figures 4 and 5 are replaced with polarisers, again there would be nothing to resolve input light on the basis of wavelength, so again what you would end up with would not be a spectrometer. In addition, there would also be no "polarising beam-splitter" because it is the interference filters in the Figure 4 and 5 embodiments that actually perform the splitting function (they split input light on the basis of wavelength). So making the examiner's substitution in either of the Figure 4 and 5 embodiments results in the lack of at least two of our claim elements.

As shown above, the examiner's anticipation rejection is technically flawed to the extent that the rejection suggests the claimed invention is anticipated by the replacement of a filter in

one of the Hopkins embodiments with a polariser. The combination of elements suggested by the examiner would not form the claimed invention and claims 1-4 and 12-20 are novel and patentable for this reason as well.

**B. There Is No Anticipation As Hopkins Does Not Disclose All Claim Elements**

In order to anticipate, a reference must disclose every element of a claimed invention. Claim 1 is directed to an imaging spectrometer that includes “at least one polarising beam splitter”. Hopkins does not anticipate claims 1-4 and 12-20 because it does not disclose any embodiment that includes a polarising beam splitter. Instead, the Hopkins embodiments use spectral filters (see Figures 1 and 3), interference filters (Figures 4-5) or dichroic filters (Figure 9). Moreover, the portion of Hopkins cited by the examiner as disclosing a polarising beam splitter – column 7, lines 44-54 - does not mention polarising beam splitters at all. Instead, the cited Hopkins excerpt discloses the use of a combination of a set of inference filters 42 and a corresponding set of reflecting surfaces 44 as a beam splitter. The interference filter/reflecting surface combination is not a polarizing beam splitter. For at least this reason, Hopkins does not disclose every feature of independent claims 1 and 20 and claims 1-4 and 12-20 are novel and patentable over Hopkins.

**III. TRAVERSE OF THE OBVIOUSNESS REJECTION**

The examiner rejected claims 5-11 for being obvious over Hopkins in view of Greivenkamp (USP 4,575,193). Claims 5-11 are patentable by virtue of their dependency upon independent claim 1 which is novel and patentable for the reasons recited in Section II above.

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